



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

29175 7590 08/24/2004

BELL, BOYD & LLOYD, LLC
P. O. BOX 1135
CHICAGO, IL 60690-1135

EXAMINER

ONUAKU, CHRISTOPHER O

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 08/24/2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/826,744	04/07/1997	YASUO IWASAKI	SONY-P7325	2669

TITLE OF INVENTION: AUDIO AND/OR DATA RECORDING AND REPRODUCING APPARATUS AND METHOD OF SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$0	\$1330	11/24/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail**

**Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
(703) 746-4000**

or **Fax**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

29175 7590 08/24/2004

**BELL, BOYD & LLOYD, LLC
P. O. BOX 1135
CHICAGO, IL 60690-1135**

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (703) 746-4000, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/826,744	04/07/1997	YASUO IWASAKI	SONY-P7325	2669

TITLE OF INVENTION: AUDIO AND/OR DATA RECORDING AND REPRODUCING APPARATUS AND METHOD OF SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$0	\$1330	11/24/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
ONUAKU, CHRISTOPHER O	2616	386-098000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
 (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/826,744	04/07/1997	YASUO IWASAKI	SONY-P7325	2669
29175	7590	08/24/2004		
BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135				
			EXAMINER ONUAKU, CHRISTOPHER O	
			ART UNIT 2616	PAPER NUMBER

DATE MAILED: 08/24/2004

Determination of Patent Term Extension under 35 U.S.C. 154 (b) (application filed after June 7, 1995 but prior to May 29, 2000)

The Patent Term Extension is 0 day(s). Any patent to issue from the above-identified application will include an indication of the 0 day extension on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Extension is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/826,744	04/07/1997	YASUO IWASAKI	SONY-P7325	2669
29175	7590	08/24/2004		
BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135				
			EXAMINER ONUAKU, CHRISTOPHER O	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 08/24/2004

Notice of Fee Increase on October 1, 2004

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after October 1, 2004, then the amount due will be higher than that set forth in the "Notice of Allowance and Fee(s) Due" because an increase in fees effective on October 1, 2004 is anticipated. See Revision of Patent Fees for Fiscal Year 2005; Proposed Rule, 69 Fed. Reg. 25861, 25863, 25864 (May 10, 2004).

The current fee schedule is accessible from WEB site (<http://www.uspto.gov/main/howtofees.htm>).

If the fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due" but not the correct amount in view of the fee increase, a "Notice of Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice of Pay Balance of Issue Fee," if the response to the Notice of Allowance is to be filed on or after October 1, 2004 (or mailed with a certificate of mailing on or after October 1, 2004), the issue fee paid should be the fee that is required at the time the fee is paid. See Manual of Patent Examining Procedure (MPEP), Section 1306 (Eighth Edition, Rev. 2, May 2004). If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously-paid issue fee should be paid. See MPEP Section 1308.01.

Effective October 1, 2004, 37 CFR 1.18 is proposed to be amended by revising paragraphs (a) through (c) to read as set forth below. As stated above, the final fee may be a different amount, and applicant should check the WEB site given above when paying the fee.

Section 1.18 Patent post allowance (including issue) fees.

- (a) Issue fee for issuing each original or reissue patent, except a design or plant patent:
- By a small entity (Sec. 1.27(a))..... \$670.00
 - By other than a small entity..... \$1,340.00
- (b) Issue fee for issuing a design patent:
- By a small entity (Sec. 1.27(a))..... \$245.00
 - By other than a small entity..... \$490.00
- (c) Issue fee for issuing a plant patent:
- By a small entity (Sec. 1.27(a))..... \$325.00
 - By other than a small entity..... \$650.00

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

Notice of Allowability

Application No.

08/826,744

Examiner

Christopher O. Onuaku

Applicant(s)

IWASAKI, YASUO

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the preliminary amendment filed 2/26/04.
2. ☒ The allowed claim(s) is/are 2-6,8,9&12-16 (now renumbered 1-12, respectively).
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☒ to Paper No./Mail Date 6.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
 - (c) ☒ including a change in Fig. 123 of Paper #7 filed 1/7/99 which has been approved by the Examiner
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 2/26/04 has been entered.

Allowable Subject Matter

2. Claim 2-6, 8, 9 & 12-16 are allowable over the prior art of record.
3. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, the invention relates to an audio and/or video data recording and reproducing apparatus for recording audio and/or video data in a recording apparatus capable of performing random access such as a hard disk drive and for reproducing the recorded audio and/or video data and to a method of the same.

The closest references Kassatly (US 5,790,177) discloses a digital video tape recorder apparatus and method in which video channels are simultaneously recorded in a recording mode, and Windrem et al (US 5,754,730) teach a digital video recording system employing standard hard disk arrays wherein redundancy is provided through a redundant data controller to handle possible failure of one drive in the array.

However, Kassatly and Windrem et al fail to explicitly disclose an audio and/or video data recording and reproducing apparatus, where the apparatus comprises a receiving means for receiving an input data stream having command data and a plurality of channels including at least one channel of audio data and one channel of video data time division multiplexed in a predetermined order, a demultiplexing means for demultiplexing the command data and each one of the plurality of channels of the received input data stream, and a reproducing means for reproducing the recorded plurality of channels from the plurality of recording means based, at least in part, on the demultiplexed command data.

Regarding claim 3, the invention relates to an audio and/or video data recording and reproducing apparatus for recording audio and/or video data in a recording apparatus capable of performing random access such as a hard disk drive and for reproducing the recorded audio and/or video data and to a method of the same.

The closest references Kassatly (US 5,790,177) discloses a digital video tape recorder apparatus and method in which video channels are simultaneously recorded in a recording mode, and Windrem et al (US 5,754,730) teach a digital video recording

Art Unit: 2616

system employing standard hard disk arrays wherein redundancy is provided through a redundant data controller to handle possible failure of one drive in the array.

However, Kassatly and Windrem et al fail to explicitly disclose an audio and/or video data recording and reproducing apparatus, where the apparatus comprises a receiving means for receiving an input data stream having command data and a plurality of channels of at least one channel of audio data and one channel of video data being multiplexed in a predetermined order, a demultiplexing means for demultiplexing the command data and each one of the plurality of channels from the received input data stream, and a reproducing means for reproducing the recorded plurality of channels from the plurality of recording means based on the demultiplexed command data.

Regarding claim 4, the invention relates to an audio and/or video data recording and reproducing apparatus for recording audio and/or video data in a recording apparatus capable of performing random access such as a hard disk drive and for reproducing the recorded audio and/or video data and to a method of the same.

The closest references Kassatly (US 5,790,177) discloses a digital video tape recorder apparatus and method in which video channels are simultaneously recorded in a recording mode, and Windrem et al (US 5,754,730) teach a digital video recording system employing standard hard disk arrays wherein redundancy is provided through a redundant data controller to handle possible failure of one drive in the array.

However, Kassatly and Windrem et al fail to explicitly disclose an audio and/or video data recording and reproducing apparatus, where the apparatus comprises a receiving means for receiving an input data stream having command data and a plurality of channels of at least one channel of audio data and one channel of video data being multiplexed in a predetermined order, a demultiplexing means for demultiplexing the command data and each one of the plurality of channels from the received input data stream, and a reproducing means for reproducing the recorded plurality of channels from the plurality of recording means, wherein the recording and reproducing control means controls the recording means recording the demultiplexed channels using the demultiplexed command data, and wherein the recording and reproducing control means controls the reproducing means reproducing the recorded plurality of channels based on the demultiplexed command data.

Regarding claim 8, the invention relates to an audio and/or video data recording and reproducing apparatus for recording audio and/or video data in a recording apparatus capable of performing random access such as a hard disk drive and for reproducing the recorded audio and/or video data and to a method of the same.

The closest references Kassatly (US 5,790,177) discloses a digital video tape recorder apparatus and method in which video channels are simultaneously recorded in a recording mode, and Windrem et al (US 5,754,730) teach a digital video recording system employing standard hard disk arrays wherein redundancy is provided through a redundant data controller to handle possible failure of one drive in the array.

However, Kassatly and Windrem et al fail to explicitly disclose an audio and/or video data recording and reproducing method, where the method comprises the steps of receiving an input data stream having command data and a plurality of channels including at least one channel of audio data and one channel of video data being multiplexed in a predetermined order, demultiplexing the command data and each one of the plurality of channels from the received input data stream, and reproducing the recorded plurality of channels from the plurality of recording means based on the demultiplexed command data.

Regarding claim 12, the invention relates to an audio and/or video data recording and reproducing apparatus for recording audio and/or video data in a recording apparatus capable of performing random access such as a hard disk drive and for reproducing the recorded audio and/or video data and to a method of the same.

The closest references Kassatly (US 5,790,177) discloses a digital video tape recorder apparatus and method in which video channels are simultaneously recorded in a recording mode, and Windrem et al (US 5,754,730) teach a digital video recording system employing standard hard disk arrays wherein redundancy is provided through a redundant data controller to handle possible failure of one drive in the array.

However, Kassatly and Windrem et al fail to explicitly disclose an audio and/or video data recording and reproducing apparatus, where the apparatus comprises an input circuit configured to receive an input data stream having command data and a plurality of channels of at least one channel of audio data and one channel of video data

Art Unit: 2616

being multiplexed in a predetermined order, and a plurality of disk drives configured to record the demultiplexed plurality of channels so that random access is possible, wherein one of the plurality of disk drives is configured to record exactly one of the plurality of channels, and wherein at least one of the plurality of disk drives is further configured to reproduce the recorded each one from the plurality of disk drives based on the demultiplexed command data.

Regarding claim 13, the invention relates to an audio and/or video data recording and reproducing apparatus for recording audio and/or video data in a recording apparatus capable of performing random access such as a hard disk drive and for reproducing the recorded audio and/or video data and to a method of the same.

The closest references Kassatly (US 5,790,177) discloses a digital video tape recorder apparatus and method in which video channels are simultaneously recorded in a recording mode, and Windrem et al (US 5,754,730) teach a digital video recording system employing standard hard disk arrays wherein redundancy is provided through a redundant data controller to handle possible failure of one drive in the array.

However, Kassatly and Windrem et al fail to explicitly disclose an audio and/or video data recording and reproducing apparatus, where the apparatus comprises an input circuit configured to receive an input data stream having command data and a plurality of channels of at least one channel of audio data and one channel of video data being multiplexed in a predetermined order, a data controller circuit configured to demultiplex the command data and each one of the plurality of channels from the

Art Unit: 2616

received input data stream, and a plurality of disk drives configured to record the demultiplexed plurality of channels so that random access is possible, wherein one of the plurality of disk drives is configured to record exactly one of the plurality of channels, and wherein at least one of the plurality of disk drives is further configured to reproduce the recorded each one from the plurality of disk drives based on the demultiplexed command data.

Regarding claim 14, the invention relates to an audio and/or video data recording and reproducing apparatus for recording audio and/or video data in a recording apparatus capable of performing random access such as a hard disk drive and for reproducing the recorded audio and/or video data and to a method of the same.

The closest references Kassatly (US 5,790,177) discloses a digital video tape recorder apparatus and method in which video channels are simultaneously recorded in a recording mode, and Windrem et al (US 5,754,730) teach a digital video recording system employing standard hard disk arrays wherein redundancy is provided through a redundant data controller to handle possible failure of one drive in the array.

However, Kassatly and Windrem et al fail to explicitly disclose an audio and/or video data recording and reproducing apparatus, where the apparatus comprises an input circuit configured to receive an input data stream having command data and a plurality of channels of at least one channel of audio data and one channel of video data being multiplexed in a predetermined order, a data controller circuit configured to demultiplex the command data and each one of the plurality of channels from the

Art Unit: 2616

received input data stream, wherein the input data stream includes multiplexed control data, wherein the data controller circuit is further configured to demultiplex the control data from the received input data stream, and wherein the control circuit controls the recording and reproducing operation based on the demultiplexed control data.

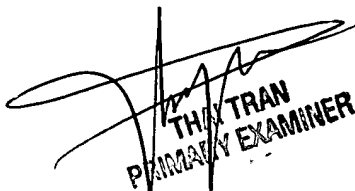
Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher O. Onuaku whose telephone number is (703) 308-7555. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Acting supervisor, Thai Tran can be reached on 703-305-4725. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


COO
8/20/04


THAI TRAN
PRIMARY EXAMINER